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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,793	07/31/2003	Chun-Seung Yang	45358	7877

7590 11/14/2006

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EXAMINER

MORRISON, THOMAS A

ART UNIT PAPER NUMBER

3653

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-6, 8-13 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,836,527 (Wong).

Regarding independent claim 1, Figs. 1-6 show a paper registration apparatus for a duplex printer which performs side registration of a sheet of paper before the sheet of paper is transferred toward a feed roller to print an image on a rear side of the sheet of paper after a front side of the sheet of paper is printed, the apparatus comprising:

a lower guide plate (42) supporting the sheet of paper thereon and having a groove (near 42a) formed at one side;

a side wall guide (16) vertically installed at the side of the groove (near 42a) of the lower guide plate (42) parallel to a direction of a paper transfer route (14) to perform a side registration of the sheet of paper;

a duplex transfer roller (including 18) installed perpendicular to the direction of the paper transfer route(14)(e.g., a line perpendicular to the paper transfer route (14) intersects the duplex transfer roller (including 18). As such, the duplex transfer roller

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can be considered to be installed perpendicular to the direction of the paper transfer route (14), as claimed);

an idle roller (including 19) installed above the duplex transfer roller (including 18) at a predetermined inclination angle with respect to the duplex transfer roller (including 18) to move the sheet of paper towards the sidewall (16);

an idle roller rotation shaft holder (Fig. 2) rotatably supporting both ends of a rotation shaft of the idle roller (including 19);

a pressing unit (column 5, lines 63-64) providing an elastic force to the idle roller (including 19) toward the duplex transfer roller (including 18); and

a pivot unit (including 30 and 36) that elastically biases the idle roller (including 19) relative to the side wall guide (16) to set the inclination angle of the idle roller (including 19) relative to the side wall guide (16) within a predetermined range according to a type of the paper. See e.g., Fig. 6 and column 8, line 20 to column 10, line 5.

Regarding independent claim 8, Figs. 1-6 show a paper registration apparatus for a printer which performs side registration of a sheet of paper, the apparatus comprising:

an idle roller (including 19) installed above a transfer roller (including 18) at a predetermined inclination angle with respect to the transfer roller (including 18) to move a sheet of paper towards a sidewall (16) of the paper the paper registration apparatus; and

a pivot unit (including 30 and 36) that elastically biases the idle roller (including 19) relative to the sidewall (16) to set the inclination angle of the idle roller (including 19) relative to the sidewall (16) within a predetermined range according to a type of the paper. See e.g., Fig. 6 and column 8, line 20 to column 10, line 5.

Regarding independent claim 15, Figs. 1-6 show a paper registration apparatus for a duplex printer which performs side registration of a sheet of paper before the sheet of paper is transferred toward a feed roller to print an image on a rear side of the sheet of paper after a front side of the sheet of paper is printed, the apparatus including

a lower guide plate (42) supporting the sheet of paper thereon and having a groove (near 42a) formed at one side;

a side wall guide (16) vertically installed at the side of the groove (near 42a) of the lower guide plate (42) parallel to a direction of a paper transfer route (14) to perform a side registration of the sheet of paper;

a duplex transfer roller (including 18) installed perpendicular to the direction of the paper transfer route (14) (e.g., a line perpendicular to the paper transfer route (14) intersects the duplex transfer roller (including 18). As such, the duplex transfer roller can be considered to be installed perpendicular to the direction of the paper transfer route (14), as claimed);

an idle roller (including 19) installed above the duplex transfer roller (including 18) at a predetermined inclination angle with respect to the duplex transfer roller (including 18) to move the sheet of paper towards the sidewall (16);

an idle roller rotation shaft holder (Fig. 2) rotatably supporting both ends of a rotation shaft of the idle roller (including 19);

a pressing unit (column 5, lines 63-64) providing an elastic force to the idle roller (including 19) toward the duplex transfer roller (including 18); and

a pivot unit (including 30 and 36) that elastically biases the idle roller (including 19) relative to the side wall guide (16) to set the inclination angle of the idle roller (including 19) relative to the side wall guide (16) within a predetermined range according to a physical characteristic of the paper. See e.g., Fig. 6 and column 8, line 20 to column 10, line 5.

With regard to the recitation "for a duplex printer which performs side registration of a sheet of paper before the sheet of paper is transferred toward a feed roller to print an image on a rear side of the sheet of paper after a front side of the sheet of paper is printed" in claims 1 and 15, this is a statement of intended use. Similarly, the recitation "for a printer which performs side registration of a sheet of paper" in claim 8 is a statement of intended use. As such, these recitations have not been given any patentable weight.

Regarding claims 2 and 9, Figs. 1-6 show that an upper guide plate (40) having a groove (near 40a) formed at a position corresponding to the groove (near 42a) of the lower guide plate (42) is provided above the lower guide plate (42).

Regarding claims 3 and 10, column 4, lines 60-61 disclose that a range of the inclination angle is **substantially** between 4 degrees and 9 degrees.

Regarding claims 4 and 11, column 4, lines 60-61 disclose that a range of the inclination angle is **substantially** between 5 degrees and 8 degrees.

Regarding claim 5, Figs. 1-6 show that the pivot unit (including 30 and 36) comprises:

- an elastic member (36) elastically supporting one side of the idle roller rotation shaft holder (Fig. 2);

- an arm (including 22) extending horizontally from the idle roller rotation shaft holder (Fig. 2) in a direction perpendicular to the idle roller rotation shaft; and

- a confining unit (including 32 and 34) confining a pivot range of the arm (including 22).

Regarding claim 12, Figs. 1-6 show that the pivot unit (including 30 and 36) comprises:

- an idle roller rotation shaft and an idle roller rotation shaft holder (Fig. 2);

- an elastic member (36) elastically supporting one side of the idle roller rotation shaft holder (Fig. 2);

- an arm (22) extending horizontally from the idle roller rotation shaft holder (Fig. 2) in a direction perpendicular to the idle roller rotation shaft; and

- a confining unit (including 32 and 34) confining a pivot range of the arm (22).

Regarding claims 6 and 13, Figs. 1-6 show that the confining unit (including 32 and 34) is a stopper where a slot is formed to confine a horizontal space in which the arm (22) is inserted and pivots.

Regarding claim 16, column 1, lines 35-45 disclose that the physical characteristic of the paper is weight. See also column 3, lines 40-47.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Allowable Subject Matter***

3. Claims 7 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.



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11/01/2006



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